

under 37 C.F.R. § 1.136(a); and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments

In the Specification:

At page 1 just after the title, please insert the following paragraph.

A¹ This claims priority to U.S. Provisional Application 60/106,118, filed October 29, 1998.

Please cancel the paragraph bridging pages 8 and 9 of the present application and insert in place thereof the following paragraph:

A² In one embodiment of the invention, a characterization protocol may include combination staining (e.g., fluorescence staining) and fluorescent in situ hybridization (FISH) (FISH protocol and probes may be found, for example, in Meyne *et al.*, in Methods of Molecular Biology, 33:63-74 (1994)). For example, specific nucleic acid sequences are suitable as probes for cancer cells. In particular, molecular probe design may include, but is not limited to, chromosomal centromere probes such as those for Chromosome 18, 5'-Cy3-TT-Cy3-TT-Cy3-GAG ATG TGTGTACTCACACTAAG AGAATTGAACCACCGTTT GAAGGGAGC-3' (SEQ ID NO: 1); Chromosome 17, 5'-

CY5-TT-CY5-TT-CY5-TGTTTC AAA CGT GAA CTT TGA AAG GAA AGT TCA
ACT CGG GGA TTT GAA TG-3' (SEQ ID NO: 2); Chromosome 7, 5'-CY5-TT-CY5-
TT-CY5-GCT GTG GCA TTT TCA GGT GGA GAT TTC AAG CGA TTT GAG GAC
AAT TGC AG-3' (SEQ ID NO:3); and mRNA Probe Design such as Cytokeratin 14
mRNA probe, 5'-CY3-TT-CY3-TT-CY3-GGA TTT GGC GGC TGG AGG AGG TCA
CAT CTC TGG ATG ACT GCG ATC CAG AG-3' (SEQ ID NO:4); Cytokeratin 19
mRNA probe, 5'-CY3-TT-CY3-TT-CY3-ATC TTG GCG AGA TCG GTG CCC GGA
GCG GAA TCC ACC TCC ACA CTG ACC TG-3' (SEQ ID NO:5); MUC I
(EPISIALIN) mRNA Probe, 5'-FITC-TT-FITC-TT-FITC-TTG
AACTGTGTCTCCACGTCTGGAC ATTGA TGGT AC C TTCTCGG AAG GC-3'
(SEQ ID NO: 6); and Estrogen-mRNA probe, 5'-CY5-TT-CY5-TT-CY5-GTG CAG
ACC GTG TCC CCG CAG GGC AGA AGG CTG CTC AGA AAC CGG CGG GCC
AC-3' (SEQ ID NO: 7); and in particular, probes for the centromere regions of
chromosome 7 (e.g., CGATTGAGGACAATTGCAG (SEQ ID NO: 8)),
chromosome 18 (e.g., GTACTCACAC TAAGAGAATT GAACCACCGT (SEQ ID
NO:9)), chromosome X (e.g., GACGATGGAGTTAACTCAGG (SEQ ID NO:10),
TCGTTGGAAACGGG AATAA TTCCCATAACTAACACAAACA (SEQ ID
NO:11), AAGCCTTTCTTATCTTCACAGAAAGA (SEQ ID NO:12)) may be
targeted. A sequence length of about 20 to about 60 nucleotides can be used, preferably
a length of about 40-45. Cancer cells can also be identified by polymerase chain reaction
(PCR) techniques, which techniques and probes are well known to those in the art.

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